

CLAIMS

1. (previously amended) A processor power supply voltage controller comprising:
a temperature sensor configured to sense a temperature of a processor and generate
a temperature signal in accordance therewith; and
a regulator coupled to provide a power supply voltage to the processor, the regulator
coupled to receive the temperature signal and control the power supply voltage, wherein the
regulator controls the power supply voltage to maintain a substantially stable crosstalk level
within the processor.
2. (original) The controller of claim 1 wherein the temperature sensor further
comprises a negative temperature coefficient resistor.
3. (original) The controller of claim 2 further comprising:
a feedback circuit coupled to the negative temperature coefficient resistor, the
feedback circuit configured to generate the temperature signal for the regulator.
4. (original) The controller of claim 1 wherein the temperature sensor further
comprises a thermal diode circuit.
5. (original) The controller of claim 1 wherein the temperature sensor is configured
to sense the temperature of the processor by sensing a temperature of a heat sink coupled to
the processor.
6. (previously amended) The controller of claim 1 wherein the temperature sensor
is configured to sense the temperature of the processor by sensing a temperature of an
enclosure including the processor.

7. (original) The controller of claim 1 wherein the temperature sensor is configured to sense the temperature of the processor by sensing a die temperature of the processor.

8. (withdrawn)

9. (original) A system for maintaining a crosstalk level within an electronic device over a variable temperature range, said system comprising:

a voltage supply circuit for supplying an output voltage to said electronic device; and
a temperature sensitive element coupled to said voltage supply circuit and for
maintaining a substantially constant crosstalk level within said electronic device by
regulating said output voltage of said voltage supply circuit, wherein said voltage supply
circuit increases said output voltage in response to a temperature increase and wherein said
voltage supply circuit decreases said output voltage in response to a temperature decrease.

10. (original) A system as described in Claim 9 wherein said electronic device is a semiconductor device.

11. (original) A system as described in Claim 10 wherein said semiconductor device is a central processing unit.

12. (original) A system as described in Claim 10 wherein said semiconductor device is a graphics processing unit.

13. (original) A system as described in Claim 9 wherein said temperature sensitive element is a negative thermal coefficient (NTC) resistor coupled in feedback to said voltage supply circuit.

14. (original) A system as described in Claim 9 wherein said temperature sensitive element is a thermistor.

15. (original) A system as described in Claim 9 wherein said voltage supply circuit is a switch mode power supply circuit.

16. (original) A system as described in Claim 9 wherein said temperature sensitive element, said voltage supply circuit and said electronic device are all mounted on a common electronic PC board.

17. (original) An electronic system comprising:
a semiconductor device operated over a variable temperature range;
a voltage supply circuit supplying an output voltage to said semiconductor device for supplying power thereto; and
a temperature sensitive element coupled to said voltage supply circuit and for maintaining a substantially constant crosstalk level within said semiconductor device over said variable temperature range by regulating said output voltage of said voltage supply circuit.

18. (original) A system as described in Claim 17 wherein said voltage supply circuit, in response to said temperature sensitive element, increases said output voltage when said temperature increases and wherein said voltage supply circuit, in response to said

temperature sensitive element, decreases said output voltage when said temperature decreases.

19. (original) A system as described in Claim 18 wherein said semiconductor device is a central processing unit.

20. (original) A system as described in Claim 18 wherein said semiconductor device is a graphics processing unit.

21. (original) A system as described in Claim 20 wherein said temperature sensitive element is a negative thermal coefficient (NTC) resistor coupled in feedback to said voltage supply circuit.

22. (original) A system as described in Claim 20 wherein said temperature sensitive element is a thermistor.

23. (original) A system as described in Claim 20 wherein said voltage supply circuit is a switch mode power supply circuit.

24. (original) A system as described in Claim 20 wherein said temperature sensitive element, said voltage supply circuit and said semiconductor device are all mounted on a common electronic PC board.

25. (original) A method of regulating an amount of crosstalk of an electronic device comprising:

operating said electronic device over a variable temperature range;
detecting an ambient temperature adjacent to said electronic device;

in response to said detecting, increasing a voltage supplied to said electronic device if said ambient temperature increases; and

in response to said detecting, decreasing said voltage supplied to said electronic device if said ambient temperature decreases, wherein said increasing and said decreasing are performed to regulate said crosstalk of said electronic device.

26. (original) A method as described in Claim 25 wherein said detecting is performed by a temperature sensitive element disposed near said electronic device.

27. (original) A method as described in Claim 26 wherein said temperature sensitive element is a negative thermal coefficient (NTC) resistor.

28. (original) A method as described in Claim 27 wherein said temperature sensitive element is a negative thermal coefficient (NTC) resistor coupled in parallel to a voltage supply circuit that supplies voltage to said electronic device.

29. (original) A method as described in Claim 28 wherein said voltage supply circuit is a switch mode power supply.

30. (original) A method as described in Claim 29 wherein said electronic device is a semiconductor device.

31. (original) A method as described in Claim 30 wherein said semiconductor device is a central processing unit.

32. (original) A method as described in Claim 30 wherein said semiconductor device is a graphics processing unit.

33. (original) A processor power supply voltage controller comprising:
a temperature sensor configured to sense a temperature of a processor and generate
a temperature signal in accordance therewith; and
a regulator coupled to provide a power supply voltage to the processor, the regulator
coupled to receive the temperature signal and supply to the processor an initial voltage when
the power supply voltage turns on and a voltage higher than the initial voltage as the sensed
temperature rises.

34. (original) The controller of Claim 33 wherein the regulator is coupled to
provide the power supply voltage to a plurality of power supply voltage inputs of the
processor.

35. (original) An electronic system comprising:
a semiconductor device operated over a variable temperature range;
a voltage supply circuit supplying an output voltage to said semiconductor device for
supplying power thereto; and
a temperature sensitive element coupled to said voltage supply circuit and for
regulating said output voltage of said voltage supply circuit, said temperature sensitive
element configured for detecting an ambient temperature adjacent to said semiconductor
device and in response to said detecting, increase said output voltage if said ambient
temperature increases and decrease said output voltage supplied to said semiconductor
device if said ambient temperature decreases, wherein said increasing and said decreasing
are performed to regulate crosstalk of said electronic device.

36. (original) A system for maintaining a crosstalk level within an electronic device
over a variable temperature range, said system comprising:

a voltage supply circuit for supplying an output voltage to said electronic device;
a feedback circuit coupled to said voltage supply circuit; and
a temperature sensitive element coupled to said voltage supply circuit and said
feedback circuit for detecting a temperature of said electronic device and for maintaining a
substantially constant crosstalk level within said electronic device by regulating said output
voltage of said voltage supply circuit, said voltage supply circuit configured to increase said
output voltage in response to said feedback circuit signaling a temperature increase and
decrease said output voltage in response to said feedback circuit signaling a temperature
decrease.